

### REMARKS

For convenience, the matters raised in the Office action are discussed below in the same order as presented by the Examiner.

Initially, applicants acknowledge the allowance of claims 20-24, and the indication of the allowability of claims 14-19. Upon reconsideration, it is believed that the Examiner will agree that claims 12-19 have been amended to more clearly distinguish over the prior art and to place the claims in condition for allowance. Newly presented claim 26 is similar to amended claim 12.

It is requested that the Examiner reconsider and withdraw the rejection of the claims under 35 USC 103(a) as unpatentable over US patent 5,460,500 to Geus et al. ("Geus 500") in view of US patent 5,397,413 to Trimble et al. ("Trimble"). As discussed below detail, even if the teachings of the references are combined, they do not result in the claimed invention.

Further, there is no motivation for combining the patent teachings and, in fact, Geus 500 teaches against the modification of its teachings in view of the Trimble teachings. Moreover, the previously submitted Guichon declaration shows unexpected improvements, acknowledged by the Examiner to be "surprising" and therefore sufficient to rebut the alleged *prima facie* obviousness of the claimed invention based upon the combined prior art teachings.

Claim 1 is characterized by the use of a divergent nozzle, electrostatic charging, and an air flow slot between the drawing assembly and diffuser for delivery of air by a venturi effect. It is the combination of these features or elements that achieve the spreading of the filaments and provision of a more homogeneous nonwoven web having improved properties. The cooperation of these features is demonstrated in the previously submitted Guichon declaration.

Herein, claim 1 has been further amended to distinguish over Geus 500 by defining the vertical slot of the drawing assembly as having a constant horizontal cross-section formed by spaced-apart walls terminating at the outlet opening and being free of setbacks adjacent the outlet opening. The Geus 500 stretching nozzle 4 includes a converging inlet opening and setbacks 9 in the walls 13 at the discharge end of the nozzle.

Amended claim 1 also provides that the airflow slot formed between the drawing assembly outlet opening and diffuser inlet opening for delivery of air onto the filaments is formed along the entire lateral extent of the openings. Moreover, the diffuser outlet opening is spaced from the receiving belt to form a receiving belt spacing that is open to the ambient air. Geus 500 teaches that the delivery unit 5 has a pair of rollers 6a at the upstream side and a pair of rollers 6b at the downstream side of the region in which the web is deposited to confine the spaces in this region so that

suction drawn by the suction source 7 below the belt 6 can draw air through the gap 12 and through the jet nozzle forming the delivery unit. To that end, suction blower 7a has an adjustable throughput.

Trimble does not remedy any of the foregoing structural deficiencies in Geus 500 and, accordingly, even if the teachings of the references are combined, the combination does not result in the claimed invention.

It remains applicants' position that there is no suggestion in the prior art for the combination of the claimed diffuser and electrostatic charging. Heretofore, the art has separately employed diffusers and electrostatic charging devices for purposes of opening filaments. The cited art is representative of this prevailing practice. The techniques are based upon different principles, and there is no basis to assume that two unlike processes will have a cooperative or additive effect. In fact, the unlikeliness of a positive combination is shown by the prior art practice of separately using the processes. Accordingly, there is no motivation for the proposed combination of teachings upon which the claims are rejected.

In any case Geus 500 teaches against its modification in view of Trimble to meet the claimed invention. Specifically, Geus 500 teaches that the advantages of its invention are only achieved if all of the apparatus elements are retained. More particularly,

at column 2, line 19 to column 3, line 12, the patentee teaches that:

"These objects and others which will become apparent hereinafter are attained, in accordance with the invention in an apparatus which comprises:

a filament spinning head ...

a vertically extending cooling chamber ...

a stretching nozzle ... having opposite walls flanking the curtain ...

a setback formed on a lower end of at least one of the walls;

a filament delivery unit below the stretching nozzle including a vertically disposed jet pump ...

a continuously movable sieve belt ... ; and

a controllable suction source below the belt ... for regulating air flow through the jet pump.

The spinning head ...

The suction source or suction blower below the sieve belt serves to regulate at least in part the quantity of the air which is drawn through the filament delivery unit so that this air quantity is controllable or regulated by the suction blower.

The invention is based upon our finding that, to increase the output for an apparatus of the aforescribed type, the stretching function on the one hand and the filament

delivery on the other must be separated and must utilize separate apparatus components.

It must be emphasized that all of the features set forth must be present, ... and the setback or setbacks formed on the lower end of one or both of the walls defining the stretching nozzle."

In this manner, Geus 500 specifically teaches the need for the setback or setbacks 9 and the controllable suction source 7 below the sieve belt 6 (cooperating with rollers 6a and 6b). In contrast, claim 1 is free of setbacks and spaces the diffuser outlet from the receiving belt to form a receiving space open to ambient air.

In combining references, all of the reference teachings must be considered. Consideration of all of the Geus 500 teachings prevents modification to meet the claimed invention. Moreover, Trimble does not even provide the teachings necessary to the required modifications.

It is respectfully submitted that the invention provides an unusual and surprising combination of improvements. That is, all three aspects or features of the invention must be present to achieve improvements in mechanical properties, uniformity of weight distribution and evenness of filament arrangement within the web.

The Guichon declaration evaluates and compares the present invention with the closest prior art and rebuts

even an assumed combination of the teachings. Here, it is shown also that each aspect of the invention is necessary, and that together they provide improvements not achieved if any one of the aspects is not present.

Claim 26 is similar to claim 12 and includes the divergent diffuser, electrostatic charging and the venturi effect. According, all of the non-allowed claims are limited to the divergent diffuser, electrostatic charging and venturi effect features or elements shown to be necessary in the Guichon Declaration. Accordingly, all of the claims presently of record are in condition for final allowance and such action is requested.

If there are any further fees required by this amendment not covered by an enclosed check, or if no check is enclosed, please charge the same to Deposit Account No. 16-0820, Order No. 34051.

Respectfully submitted,

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